

07.73
486842
v 37
Pittsburgh Univ. Mus.
Animals

ART. 10. DESCRIPTION OF A NEW RACE OF THE
SALAMANDER *PSEUDOBRANCHUS STRIATUS* (LE CONTE)

BY COLEMAN J. GOIN

UNIVERSITY OF FLORIDA; GAINESVILLE, FLORIDA
AND

JOHN W. CRENSHAW, JR.¹

EMORY UNIVERSITY FIELD STATION; NEWTON, GEORGIA

The population of *Pseudobranchus* that occurs in northern and western Florida and southwestern Georgia appears to be a homogeneous one which differs from both *Pseudobranchus striatus striatus* and *P. s. axanthus* and we propose for it the name,

***Pseudobranchus striatus spheniscus*, new subspecies**

Type: Carnegie Museum, no. 29,015, adult female, collected on July 4, 1948, by George B. Rabb and James E. Mosimann.

Type locality: Seven miles south of Smithville, Lee County, Georgia.

Paratypes: Twenty-two, as follows:² *Florida*; CM 21,440-41, from 30 miles north of Lake City, Columbia County; CM 21,466, from 12.2 miles west of Wewahitchka, Gulf County; DBUF 1,855 (4 specimens), from Lake Iamonia, Leon County; DBUF 52, from Tallahassee, Leon County; and CM 20,160 (2 specimens), from 5.4 miles south of Telogia, Liberty County. *Georgia*; CAS 15,246 (3 specimens) from Mossy Pond, western Baker County; USMN 128,140-44 and UMMZ 99,390 (3 specimens) from Putney Pond, northwestern Baker County; and AMNH 34,626, from Lakeland, Lanier County.

¹ We are indebted to Doris M. Cochran, C. M. Bogert and M. Graham Netting for the loan of material, to Horton H. Hobbs and George B. Rabb for aid in collecting, and to Melvin H. Goodwin for making possible the junior author's work at the Emory Field Station at Newton, Georgia.

² AMNH, American Museum of Natural History; CAS, Chicago Academy of Sciences; CM, Carnegie Museum; DBUF, Department of Biology, University of Florida; UMMZ, University of Michigan Museum of Zoology; USNM, United States National Museum.

A 62 mm. specimen from Berrien County, Georgia (originally USNM 62,095), was examined by the senior author several years ago, and although it is in poor condition and somewhat faded, enough of its characters could be distinguished to indicate that it is representative of this new race. It has since been sent on exchange to the Instituto Miguel Lillo, Tucumán, Argentina.

FEB 1 1950



Diagnosis: A slender *Pseudobranchus* with a narrow, wedge-shaped head; the lateral stripes are distinct and tan in color, tending to continue forward through the eye to the tip of the snout. It differs from *striatus striatus* in its more slender body and narrower head. The lateral stripes are narrower and the coloration more somber. From *s. axanthus* it differs in having the lateral stripes tan rather than gray and tending to continue through the eye to the tip of the snout, and in having the head narrow and wedge-shaped rather than broad and truncate.

Description of type: Head elongate, sides of head nearly straight but tapering anteriorly to region of eyes, thence tapering more abruptly to a sharply rounded snout; no pronounced swelling in parietal region. Head acute in profile, slightly arched. Mouth small, ventral in position, posterior angle of mouth separated from a line dropped from anterior border of eye by about the diameter of an eye. Outline of upper jaw convex as seen from side, due to pendulous upper lip; upper jaw projecting beyond lower. No canthus rostralis. Loreal region convex. Nostril, an elongate, longitudinal slit, ventrolateral in position, its anterior corner about on a line with anterior portion of mouth, not visible from above. Internarial distance (ventrally) about twice diameter of eye. Eye small, not protruberant, without eyelids but completely covered by a thin membrane, its diameter about $\frac{2}{5}$ its distance from posterior corner of nostril. Interorbital distance about 4 times diameter of eye. Head width 14.0 times in body length; head length 7.68 times in body length.

Body slender, nearly circular in cross section; no constriction in neck; a narrow mid-dorsal groove; a shallow, longitudinal depression along center of lateral stripe; a shallow mid-ventral groove extending posteriorly to base of tail. Costal grooves 34, distinct, connecting across abdomen and extending well up on sides. Vent a short longitudinal slit.

Tail 1.5 times in snout-to-vent length, ovoid in vertical cross section at base; gradually becoming more and more compressed to flat tip. A narrow fin on distal $\frac{2}{3}$ of dorsal surface of tail and a similar fin on distal $\frac{1}{4}$ of ventral surface of tail, fins connecting around tip of tail. Fins never so broad as tail musculature.

Forelimbs present, minute. Fingers three, short, stout, 2-1-3 in order of decreasing length, not webbed. Minute horny caps covering tips. No metacarpal tubercles present.

External gills three. Gills on both sides compacted and covered by an investing integument so that they do not hang free; extending posteriorly on both sides to base of forelimbs.

Tongue small, well back in mouth, its acutely-pointed anterior-half free. A black horny sheath present at anterior end of each jaw, that of upper jaw very short, oval in shape and arched, that of lower jaw a well-developed transverse ridge, curving backward at its outer ends. Lower jaw with rather long, recurved, sharply pointed, well-separated teeth, arranged in two rather irregular rows on the anterior portion of each mandible. Two elongate patches of prevomerine teeth, beginning slightly behind horny sheath in upper jaw. Internal nares long, longitudinal openings slightly diagonal in position, each deeply buried in a fold of tissue that is apparently capable of tight closure.

Measurements of type (in millimeters): Head length (tip of snout to base of foremost gill), 9.5; body length, 73.0; tail length, 55.5; total length, 138.0; forelimb length, 4.0; head width (maximum), 5.2; body width (maximum), 5.4; body depth (maximum), 5.5.

Coloration of type (preserved): Top of head and dorsum dark brownish gray. Head without any distinct markings but with a faint indication of a light stripe from nostril to base of gill on each side. A yellowish brown stripe about 1 mm. in width extending along each side from base of gill posteriorly to base of tail where it becomes broken and continues as an indistinct broken line to tip of tail; another more yellowish stripe extends from base of arm on each side posteriorly to the region of the vent. This ventrolateral stripe extends on to the ventral surface of the forelimb. The distance between the lateral and ventrolateral stripes on each side is about equal to the width of the two stripes. The area between them is grayish black. The venter is a dark gray with indistinct scattered light spots of yellowish fuscous. There is no discernible mid-dorsal stripe but the dorsal margin of the tail fin is edged with fuscous.

Variation: Most of the variation in the typical series seems to be due to age and state of preservation. Eleven of the specimens are definitely immature. The narrow, wedge-shaped head is the most striking characteristic and is apparent in all specimens from the smallest to the largest. In the largest specimen, the type, the head stripes are not so prominent as they are in the other specimens of the series, but nevertheless more prominent head stripes seem to be characteristic of this race.

Remarks: This new race is apparently much more difficult to collect than is *axanthus*. The senior author has on numerous occasions taken more *axanthus* in a single afternoon from some of the hyacinth-filled ditches and marshes around Gainesville, Florida, than there are specimens of *spheniscus* in the type series. This is certainly not due to intensity of

collecting alone since he has made several trips to northwestern Florida for the express purpose of searching for *spheniscus* but has been able to collect only one specimen. Intensive collecting in Baker County, Georgia, by the junior author, in a region where *spheniscus* is known to occur, has produced only eleven specimens. We believe this difference may be due in part to a difference in the habits of the two forms. *P. s. axanthus* is abundant among masses of vegetation, especially in the roots of water hyacinths, in the large marshes of peninsular Florida, but *spheniscus* generally occurs in small to medium, shallow, limesink ponds, abounding in pond cypress (*Taxodium ascendens*) and black gum (*Nyssa biflora*). In so far as we know, the water hyacinth is not found in much of the area. It certainly does not occur in any of the ponds in Baker and Lee Counties, Georgia, from which specimens of *P. s. spheniscus* were collected. Although much time was spent in seining masses of *Cabomba* and *Myriophyllum* just beneath the surface, no specimens were collected in this manner. All but one of the southwestern Georgia specimens were collected by seining and examining bottom detritus. The other was unearthed from the mud bottom of a dried-up pond. Several of the Florida specimens were taken by Dr. Horton H. Hobbs while collecting crayfishes with a dip net. From our limited knowledge of this form we suspect that it has a tendency to remain burrowed in decaying bottom vegetation.